

## **ABSTRACT**

This invention relates to a pneumatic closed-looped antilock pressure device in a pneumatic brake system for a truck tractors, semi-trailer and buses, and a differential pressure regulator for pneumatic brake system as it pertains to pneumatic brake systems for semi-trailers, buses, trucks, and trucks/semi-trailers, singular and in multiple combinations in automotive air brake installations; and more particularly to a pressure modulating device that employs a diaphragm, piston and elastomeric member with pneumatic antilock brake system functions, a means for modulating pneumatic signals, a means for oscillating pneumatic signals and a means relieve pressure internally, therewith sensing pneumatic shock wave signals, and dampening shock waves, and automatically adjusting brake actuation forces and the degree of angular rotation of the wheels in a closed-looped system without venting pressure to the atmosphere.

**25 Claims, 10 Drawing Sheets**